

## **REMARKS**

Clarifying amendments have been made to the independent claims 1 and 15, as well as to dependent claim 3.

The Examiner has changed the grounds for rejection, and is now rejecting claims 1, 2, 10, 14 and 15 under 35 USC 103(a) as being unpatentable over Hornick et al. (US 5,255,184, previously cited) in view of Gale et al. (Advance-Purchase Discounts and Monopoly Allocation of Capacity", *The American Economic Review*, Vol. 83, No. 1 (March 1993, pp. 135-146, newly cited). The Examiner is now rejecting claims 3-9 and 11 under 35 USC 103(a) as being unpatentable over Hornick et al. in view of Gale et al. and further in view of Talluri (US 6,263,315, previously cited). These rejections are respectfully disagreed with and are traversed below.

It is noted that when rejecting the claims under 35 USC 103(a) as being unpatentable over Hornick et al. in view of Gale et al. the Examiner refers to claim 14. The Office Action Summary sheet also refers to claim 14. Claim 14 was cancelled without prejudice or disclaimer in the previous response.

In the Response to Arguments section the Examiner takes issue with the previous argument that Hornick et al. actually teach away from the claimed invention. In part the Examiner states that nothing in Hornick et al. "tends to disparage sharing a capacity between two flights or otherwise present it as an unworkable solution". The Examiner cites *In re Fulton* and several sections of the MPEP in asserting that the disclosure of Hornick et al. "does not rise to the level of a teaching away". The Examiner's reliance on *In re Fulton* is believed to be misplaced in this case.

As is stated in MPEP 2145 X.D:

"the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not

criticize, discredit, or otherwise discourage the solution claimed.." *In re Fulton*, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

As is stated in MPEP 2143.01 (emphasis added):

**Obviousness** can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006) (discussing rationale underlying the motivation-suggestion-teaching >test< as a guard against using hindsight in an obviousness analysis).

In *In re Fulton*, 391 F.3d 1195, 73 USPQ2d 1141 (Fed. Cir. 2004), the claims of a utility patent application were directed to a shoe sole with increased traction having hexagonal projections in a "facing orientation." 391 F.3d at 1196-97, 73 USPQ2d at 1142. The Board combined a design patent having hexagonal projections in a facing orientation with a utility patent having other limitations of the independent claim. 391 F.3d at 1199, 73 USPQ2d at 1144. Applicant argued that the combination was improper because (1) the prior art did not suggest having the hexagonal projections in a facing (as opposed to a "pointing") orientation was the "most desirable" configuration for the projections, and (2) the prior art "taught away" by showing desirability of the "pointing orientation." 391 F.3d at 1200-01, 73 USPQ2d at 1145-46. The court stated that "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed.." *Id.* \*\* In affirming the Board's obviousness rejection, the court held that the prior art as a whole suggested the desirability of the combination of shoe sole limitations claimed, thus providing a motivation to combine, which need not be supported by a finding that the prior art suggested that the combination claimed by the applicant was the preferred, or most desirable combination over the other alternatives. *Id.*

In the instant case it was previously argued that col. 6, lines 48-56, of Hornick et al. states the following:

**Booking limits  $S_p^i$  must be set for fare class  $i$  on itinerary  $p$  so as to maximize total system revenue, subject to the constraint that the total number of seats authorized for sale on each flight leg  $a$  is exactly equal to the capacity of that leg  $C_a$ , i.e., the number of seats on the aircraft flying the leg** (overbooking is considered in the fourth section below). As a matter of notation, the superscript  $i$  is dropped whenever a total over all fare classes is taken, and hence...

That is, Hornick et al. clearly state that the booking limits for a particular flight leg are "subject to the constraint that the total number of seats authorized for sale on each flight leg a is exactly equal to the capacity of that leg  $C_a$ , i.e., the number of seats on the aircraft flying the leg."

It was argued that Hornick et al. actually teach away from the claimed subject matter that an overall number of available seats at the predefined level of expected revenue is a function of the numbers of locally available seats determined for the given transport service and the at least another transport service.

The "overbooking" reference by Hornick et al in section 4 (col. 14, lines 10-19) states in part:

Overbooking is the practice of authorizing the sale of seats in excess of an aircraft's seating capacity. This practice increases revenues on flights where there is a high incidence of cancellation or no-shows. Overbooking can easily be handled in a network-based EMSR seat inventory control system by setting the capacity of leg a to  $B_a C_a$  where  $B_a$  is the overbooking factor for flight leg a. This allows the definition of leg-specific overbooking factors. An alternative approach is to establish itinerary/fare class-specific overbooking factors.

There is clearly nothing in this section that suggests more than one flight.

In the instant case it is not seen how the teachings of Hornick et al. are analogous to the situation presented by *In re Fulton*, where "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed". The teachings of Hornick et al. are not seen to disclose more than one alternative. Instead, they disclose but one solution, i.e.: ".subject to the constraint that the total number of seats authorized for sale on each flight leg a is exactly equal to the capacity of that leg  $C_a$ , i.e., the number of seats on the aircraft flying the leg". The reason that Hornick et al. do not tend "to disparage sharing a capacity between two flights or otherwise present it as an unworkable solution", as stated by the Examiner, is simply that they do not present "more than one alternative". Hornick et al. instead disclose only that the

capacity of a leg is "exactly equal" to the number of seats on the aircraft flying the leg.

Thus, the Examiner's statement, in the context of *In re Fulton*, that Hornick et al. "does not rise to the level of a teaching away" is not agreed with.

In any event, the prior rejection was made under 35 USC 102(b), and it was clearly shown that Hornick et al. did not anticipate claim 1 under 35 USC 102(b), as all material elements of claim 1 were not found in Hornick et al.

Turning now to the most recent office action, Gale et al. do discuss two parallel flights (same origin and destination) and page 136 discloses a "total capacity" of two flights each having a capacity  $K$ . The "total capacity" of both flights is assumed to be sufficient to serve all consumers.

However, the total capacity of parallel flights in Gale et al. is not used for determining availability on one flight. In Gale et al. it is a known assumption that demand is higher than what is offered on a first flight (a peak period) at sale time, and this demand thus needs to be transferred to another flight (off peak period). Gale et al. disclose a method to transfer the consumer demand from the peak period flight to the off-peak period flight by the use of incentives. Gale et al. thus are concerned with providing a pricing policy that offers an advance-purchase discount fare for the off-peak flight (see. for example, page 137, first column, first full paragraph).

In Gale et al. consumers are induced to buy another flight due to an attractive /cheaper price. It is thus the consumer who chooses to book on an alternate flight, with possibly a different level of service (e.g., see the abstract of Gale et al.)

In contrast, the exemplary embodiments of this invention do not seek to transfer consumer demand to other flights, but instead accept demands for one flight even if the local capacity is depleted.

By way of example, consider two "parallel flights":

Flight 123	Local seats: 700	Departure: 6.00 am
Flight 243	Local seats: 700	Departure: 6.05 am

According to Gale et al., if 700 seats have already been booked on Flight 123, a further reservation request received for Flight 123 could lead to the following message: "Sorry, no seat is available in compliance with your request. However, some other flights have availability".

According to the exemplary embodiments of this invention, in the same situation, the message would be "Some seats are available in compliance with your request". This is due to the fact that when processing requests for Flight 123 the exemplary embodiments take into account the capacities of other flights. The process is seamless for the traveler who will obtain a ticket for flight 234 in a cabin having the same level of service.

Clearly, Gale et al. do not disclose or suggest "determining, for the given class of service (k) on the given transport service ( $F_i$ ), an overall number of available seats  $XFAV_{Fik}(Y)$  at the predefined level of expected revenue (Y) as a function of the numbers of locally available seats ( $av_{Fik}(Y)$   $av_{Fjk}(Y)$ ) determined for the given transport service ( $F_i$ ) and the at least another transport service ( $F_j$ ) between said two locations", as stated by the Examiner. In contrast, Gale et al. teach away from calculating availability on one flight using capacities of others flights.

As such, and even if combined with Hornick et al. (which is not admitted is suggested or workable), the addition of Gale et al. would not cure the deficiencies of Hornick et al.

However, in order to even further clarify and distinguish the claimed subject matter each of the independent claims 1 and 15 has been amended in a similar fashion. Claim 1 now recites in part:

using the overall number of locally available seats  $av_{Fjk}(Y)$  as an availability capacity when considering an availability request for the given class of service (k)

on the given transport service ( $F_i$ ) between said two locations,

and claim 15 recites in part:

using the determined overall number of available seats as an availability capacity when considering an availability request for the given class of service (k) on the flight leg of the first flight ( $F_i$ ) between the two locations.

Support for this amendment can be found at least in paragraphs [0065], [0083] and [0090] of the corresponding published US application 2005/0278201.

Clearly, the teachings of Gale et al. do not disclose this subject matter and, as a result, the proposed combination of Hornick et al. and Gale et al. does not disclose or suggest this subject matter.

The foregoing arguments apply as well to claim 2, as it has been shown that the "total capacity" of Gale et al., in the context of the independent claim, does not provide a teaching that in combination with Hornick et al. would render the claimed subject matter unpatentable.

The Examiner is respectfully requested to reconsider and remove the rejection of claims 1, 2, 10 and 15 under 35 USC 103(a), and to allow these claims. Further, in that claim 1 is clearly allowable, then all claims that depend from claim 1 are also clearly allowable for at least this one reason alone, whether or not the disclosure of Talluri is considered in combination with Hornick et al. (which proposed combination is not admitted is suggested or technically feasible, and without admitting that Talluri actually teaches subject matter that would read on the subject matter of the dependent claims).

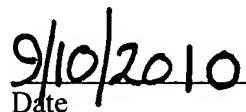
The Examiner is respectfully requested to reconsider and remove the rejections of the claims under 35 U.S.C. 103(a) and to allow all of the pending claims as now presented for examination. An early notification of the allowability of claims 1-11 and 15 is earnestly solicited.

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If the Examiner believes that a telephone interview would be useful in advancing this patent application to allowance and issue then the Examiner is respectfully invited to contact the undersigned by phone, facsimile or email.

Respectfully submitted:

  
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